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09/698,676	10/26/2000	Mic Ueda	68767	6002

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EXAMINER

RADA, ALEX P

ART UNIT

PAPER NUMBER

3713

DATE MAILED: 04/02/2002

*Open due 7/2/02*

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/698,676

Applicant(s)

UEDA ET AL.

Examiner

Alex P. Rada

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- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 28-31 is/are rejected.
- 7) ☒ Claim(s) 25-27 and 32-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## DETAILED ACTION

### *Drawings*

1. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "figure 20" has been used to designate both a diagram showing the control method of motions and expressions in accordance with the motion input from the respective sensors during the happy mode and a flowchart for explaining the initialization processing. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "figure 21" has been used to designate both a diagram showing the control method of motions and expressions in accordance with the motion input from the respective sensors during the grumpy mode and a flowchart for explaining a modification example of the initialization processing. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to under 37 CFR 1.83(a) because they fail to show Graph I, Graph II, a diagram showing the control method of motions and expressions in accordance with the motion input from the respective sensors during the happy mode (pg 22, line 26 – pg 24, line 14) and a diagram showing the control method of motions and expressions in accordance with

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the motion input from the respective sensors during the grumpy mode (pg 24, line 15 – pg 25, line 34) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

5. The abstract of the disclosure is objected to because it exceeds the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 112*

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 2, 6, 7, 24, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the control parameter" in line 3. There is insufficient antecedent basis for this limitation in the claim.

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Claim 6 recites the limitation "said counter means" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the value" in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 24 recites the limitation "the count value" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the controlling data" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the number" in line 4. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C.

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122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Hampton '490.

10. Hampton discloses a detection means, a storage means for storing information relating to a plurality motion patterns, a parameter alteration means, a selecting means, and a control means for controlling the electronic toy to move in a motion pattern (abstract and summary).

11. Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated Choi '104.

12. Choi discloses a data acquisition interface for receiving sensory input represented by detection signals responsive to external inputs, a control program for establishing and altering a parameter value representative of the received sensory input, the control program selecting upon detection signals being output from the detection means, information on an arbitrary motion pattern among the plurality of motion patterns stored in a storage means responsive to the parameter value, and the control program controlling the electronic toy to move in the selected motion pattern.

13. Claim 29 is rejected under 35 U.S.C. 102(a) as being anticipated by Fujita (EP) '011.

14. Fujita discloses a selecting switch for selecting between different modes, a memory for storing an initial setting for the different switches, a programmable controller responsive to the memory for performing motions in the different modes.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1, 5, 11, 16-19, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (EP) '237 in view of Hampton.

17. Kato discloses a detection means for detecting external inputs, a storage means for storing information relating to a plurality of motion patterns, a control means for controlling the electronic toy to move in the motion pattern, and a body and leg housing cam mechanism as recited in claims 1, 17, and 23. Kato does not expressly disclose a parameter alteration means for establishing a parameter value in accordance with predetermined time intervals as recited in claim 1. The detection means comprises of a sound detection means for detecting external sound, a contact detection means for detecting external contact, and a light detection means as recited in claim 5. The information processor for controlling the electronic toy and detection means having a plurality of sensory inputs for generating sensory signal indicative of handling and touching sensory inputs received by the information processor as recited in claim 11. The plurality of sensory inputs comprising infrared light detection as recited in claims 16, 18, and 19. The information processing for coordinating movements of differing operational states including sleeping, walking, excited and hungry states with auditory sensory output as recited in claim 21. Hampton teaches a parameter alteration means for establishing a parameter value in accordance with predetermined time intervals (figure 54) and a sound detection means for detecting external sound, a contact detection means for detecting external contact, a light detection means, an information processor for controlling the electronic toy and detection means having a plurality of sensory inputs for generating sensory signal indicative of handling and touching sensory inputs



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received by the information processor, a plurality of sensory inputs comprising infrared light detection, and an information processing for coordinating movements of differing operational states including sleeping, walking, excited and hungry states with auditory sensory output (summary). By having a parameter alteration means and detection means, one of ordinary skill in the art would be able to imitate the characteristic of a realistic animal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to modify Kato to include a parameter alteration means for establishing a parameter value in accordance with predetermined time intervals and a sound detection means for detecting external sound, a contact detection means for detecting external contact, a light detection means, and an information processor for controlling the electronic toy, detection means having a plurality of sensory inputs for generating sensory signal indicative of handling and touching sensory inputs received by the information processor, a plurality of sensory inputs comprising infrared light detection, and a information processing for coordinating movements of differing operational states including sleeping, walking, excited and hungry states with auditory sensory output as taught by Hampton. To do so would be able to mimic the mannerisms of a real animal.

18. Claims 2-4, 6-7, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato and Hampton in view of Kamiya '772.

19. Kato in view of Hampton disclose most of the elements as described above. Kato and Hampton do not expressly disclose the parameter alteration means alternates between a happy mode and a grumpy mode in predetermined cycles based on the control parameter, the number of detections, and parameter values as recited in claims 2-4 and 22. The counter means for counting the number of detection signals output from the detection means and selecting



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information on a special motion pattern as recited in claims 6 and 7. The auditory sensory output related to the environment of the electronic toy as recited in claim 20. Kamiya teaches parameter alteration means between different emotion in predetermined cycles based on control parameter, the number of detections, values, and a counter means for counting the number of detection signals output from the detection means and selecting information on a special motion pattern, and an auditory sensory output related to the environment of the electronic toy. By having specific detections parameters, one of ordinary skill in the art would be able to limit the amount of expressions to combine to be used in an interactive toy. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to modify Kato to include a the parameter alteration means alternates between a happy mode and a grumpy mode in predetermined cycles based on the control parameter, the number of detections, parameter values, and a counter means for counting the number of detection signals output from the detection means and selecting information on a special motion pattern, and an auditory sensory output related to the environment of the electronic toy as taught by Kamiya. To do so would be able to create realistic emotions to mimic an animal.

20. Claims 8 and 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato and Hampton in view of Fujita (EP) '011.

21. Kato in view of Hampton disclose most of the elements as described above. Kato and Hampton do not expressly disclose a first storage unit, a second storage unit, and a third storage unit. Fujita teaches a first storage unit, a second storage unit, and a third storage unit. By having several storage units, one of ordinary skill in the art would be able to add or exchange data. It would have been obvious to one of ordinary skill in the art at the time of the applicant's

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invention was made to modify Kato to include a first storage unit, a second storage unit, and a third storage unit as taught by Fujita. To do so would be able to create a modular robot system to implement different characteristics of a realistic animal.

22. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato, Hampton, and Fujita as applied to claims 1 and 8 above, and further in view of Yamamoto.

23. Kato, Hampton, and Fujita disclose most of the elements as described above. Kato, Hampton, and Fujita do not expressly disclose a selection means that selects a combination of posture motion pattern, sound patterns, and expression patterns stored in the storage means. Yamamoto teaches a combination of posture motion pattern, sound patterns, and expression patterns stored in the storage means. By having different combinations of motions and expressions, one of ordinary skill in the art would be able to simulate different reactions a realistic animal. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Kato to include a combination of posture motion pattern, sound patterns, and expression patterns stored in the storage means as taught by Yamamoto. To do would be able to mimic the realistic sounds and movements of an animal.

24. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato, Hampton, and Fujita as applied to claims 1 and 8 above, and further in view of Kamiya.

25. Kato, Hampton, and Fujita disclose most of the elements as described above. Kato, Hampton, and Fujita do not expressly disclose an expression pattern includes a motion pattern for changing at least the size or the shape of the eyes. Kamiya teaches an expression pattern includes a motion pattern for changing at least the size or the shape of the eyes. By having different expression patterns for the eyes, one of ordinary skill in the art would be able to match

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the sound and movement with a visual expression. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made of modify Kato to include an expression pattern includes a motion pattern for changing at least the size or the shape of the eyes as suggested by Kamiya. To do so would be able to fully mimic a realistic animal.

26. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato and Hampton in view of Greenbelt '786.

27. Kato in view of Hampton disclose most of the elements as described above. Kato and Hampton do not expressly disclose a magnetic sensor, the magnetic sensor coupled to the information processor for indicating a feeding function comprising a bone having a magnet, and the plurality of sensory inputs comprising a sensor for generating sensory signal indicative of the positioning of an apparatus in the vicinity of the electronic toy as recited in claims 12-15. Greenbelt teaches a magnetic sensor, the magnetic sensor coupled to the information processor for indicating a feeding function comprising a bone having a magnet, and the plurality of sensory inputs comprising a sensor for generating sensory signal indicative of the positioning of an apparatus in the vicinity of the electronic toy. By having a magnetic sensor, one of ordinary skill in the art would be able to use a wide variety of sensors to simulate different responses. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to modify Kato to include a magnetic sensor, the magnetic sensor coupled to the information processor for indicating a feeding function comprising a bone having a magnet, and the plurality of sensory inputs comprising a sensor for generating sensory signal indicative of the positioning of an apparatus in the vicinity of the electronic toy as taught by Greenbelt. To do so would be able to have child participate in the interactions of a realistic pet.

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For the purpose of the rejection of claim 15, it would have been obvious to one of ordinary skill in the art to include pushbutton switches coupled to an information processor to have easy access to the controls.

28. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita in view of Kawai '646.

29. Fujita discloses a memory for storing initial setting for a character standard mode for performing motion, a memory for storing initial setting for a character standard mode, and a programmable controller responsive to the memory for performing motions in the character standard mode as recited in claim 29. The character standard mode is set by the initial setting associated with the memory and controlling motion on the basis of data of the standard mode as recited in claim 30. Fujita does not expressly disclose a charactering rearing mode as recited in claim 29. Kawai teaches a rearing mode. By having a rearing mode, one of ordinary skill in the art would be able to simulate the care of an animal. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to modify Fujita to include a rearing mode as taught by Kawai. To do so would be able to simulate parental duties of an interactive toy.

*Allowable Subject Matter*

30. Claims 25-27, and 32-34 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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31. Claims 24 and 31 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### *Conclusion*

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yokoi '526, '966, and '871 discloses a simulation device for fostering a virtual creature where the virtual creature is disciplined.

Inoue '552 discloses a robot apparatus capable of autonomously performing actions in natural ways.

Naruki '152 discloses an image display device, a ROM containing a plurality of image data indicative of the actions of an animal character.

Stuckman '815 discloses a virtual electronic pet capable of performing a plurality of activities and capable of displaying a plurality of behaviors, at least one of the plurality of behaviors dependent upon performance of at least one of the plurality of activities.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex P. Rada whose telephone number is 703-308-7135. The examiner can normally be reached on Monday - Friday, 8:00-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on 703-308-4119. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Alex P. Rada  
Examiner  
Art Unit 3713

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March 20, 2002



JESSICA HARRISON  
PRIMARY EXAMINER